

Histories of singular cases of ruptured uterus and vagina / by the late Dr Ross ... ; communicated to Dr Duncan by James Carmichael.

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S E C T. II.

MEDICAL OBSERVATIONS.

I.

Histories of Singular Cases of ruptured Uterus and Vagina. By the late Dr Rofs, Physician at Hamburg. Communicated to Dr Duncan by Dr James Carmichael, Port-Glasgow.

CASE I.

SUPPOSED LACERATION OF THE VAGINA,
DURING PERTURITION.

HAMBURG, 1st July, 1785,—I was called to the wife of Mr Granan, clergyman in Eppendorf, about two English miles from this place.

Mrs Granan had been in labour of her fourth child since 11 o'clock in the morning, with moderate pains. But the midwife finding, that, besides the head, a hand presented, Mr Granan thought proper to send for other assistance. Notwithstanding this, the midwife, imagining that she could deliver the woman before any one came, made an attempt to reduce the hand. During which time, the patient said she had had four very strong pains, and felt as if somewhat was torn, and as if a considerable change had taken place within her; the child mounting higher, and at first moving violently; but that the motion of the child soon afterwards ceased entirely, and the labour-pains also.

The midwife observed a change in the appearance of the belly. The swelling, which had occupied the lower part, now extended across the upper, and seemed divided, giving her the idea of twins.

Professor Unzer, a physician of Altona, who arrived at the house before me, and had already examined, informed me, that he had felt the intestines; and that the
uterus

uterus was, in a great measure, torn off from the vagina; that in this situation of affairs, he had made an unfavourable prognostic; and waited for my coming.

This change, or laceration, (if what is above or afterwards related can convince the reader that it was such), took place about four o'clock. It was now three quarters past seven. No hæmorrhage; no faintings, or other bad symptoms; the pulse natural.

After a short consultation, supposing it to be the only mean for saving mother and child, provided the latter was yet alive, we determined for the delivery.

The lady being properly placed, it was agreed upon that I should examine; and, at the same time, if I found the rent large enough for the purpose, and that it was practicable, then I was to deliver by turning. Otherwise, we were to propose gastrotomy.

Before I sat down to examine in the vagina, I cast my eye on the abdomen, and felt it, in order to determine the position of the child, and which hand to introduce.

The child was more extended from one hypochonder to the other; and the parts likewise appeared, and were felt more distinctly through the integuments than usual. I was pretty certain, that the upper parts lay to the left, the feet to the right of the mother; therefore that the right hand was to be introduced.

In passing up the hand, I met with a loose pendulous body in the pelvis; which, as intestines had been mentioned, I thought might possibly be such, or the edge of the placenta. However, without particular examination, I passed my hand up behind it, and beyond the brim of the pelvis, without feeling the os uteri, or meeting with any other resistance. The points of my fingers now touched the child immediately, without any intervening substance.

On examining the part, I found it was an arm. I passed along the body of the child, towards the woman's right side; and, getting to the extremity of a limb, I reached the right foot, which I brought gently down. The body easily followed, without bringing

bringing down the other foot; the back of the child to the fore-parts of the mother.

In attempting to bring down the left arm, I met with some resistance; therefore I extracted the right, and afterwards (but still with some difficulty) the left. The head easily followed. There was no pulsation in the funis; the child as white as usual after uterine hæmorrhage, from a previous separation of the placenta. I have seen children born alive, even by turning, where the mother was irrecoverably exhausted by a many hours continuance of uterine hæmorrhage, from a partial solution of the placenta; and others lost in a short time, apparently, from that cause, where it had not been necessary to accelerate the birth, where the child had suffered no violence, and the mother was not very much reduced.

I introduced my hand again; met with the secundines pretty high above the pelvis, quite detached all around. But I felt nothing of the fundus uteri, nor any thing circumscribing the space my hand was in.

At this instant, my colleague, having his hand on the abdomen, said, "Here is the placenta;

placenta ; but I do not feel your hand." I then applied my left hand to the place he pointed out, where I found the contracted uterus, just above the ossa pubis. My right was then much higher on the placenta, which I brought away.

I introduced the hand a third time, now to examine the uterus ; the orifice of which I found contracted full as much as usual some hours after delivery. I passed up behind it, and could not doubt of my palm being on the external posterior surface of that viscus. But, to be convinced that an exceedingly dilated vagina did not occasion deception, I turned to the woman's left, to feel for the ovarium, and got an appendage of the uterus immediately between my fingers and thumb, probably the ligamentum ovarii. I felt no coagula nor intestines, but did not particularly search for them.

The uterus, which felt very loose, moveable, and detached, I now reduced to its natural situation, and applied a bandage. I then told my colleague, that I was now satisfied of his having conjectured right, (for I had all along entertained some doubt).

He

He replied, that it was no conjecture; for he had felt, and even seen, the intestines of the mother.

Putrescency of the fluids discharged into the cavity of the abdomen, with its consequences, fever, and colliquative diarrhœa, were apprehended; for which reason, a large syringe, mild antiseptic injections, also a flexible canula of wire covered with plaster, were kept in readiness. But there never was occasion to use either.

The belly was considerably swelled the 3d and 4th days, with some, but not frequent, vomiting, and a few apthæ. Very little lochial discharge took place, and that not at all foetid. No more fever than usual in ordinary cases. No considerable diarrhœa, nor any uncommon symptom. She had her belly kept open; took early and liberally of extract of Peruvian bark, and also Riverrus' mixture: she had in general appetite for food, and slept well.

I examined in the vagina, at two different times, during the first days, to discover if the vomiting had forced any thing down into the pelvis, but found nothing.

The

The 3d of August, the 34th after delivery, I examined again in the vagina. The os uteri admitted the point of a finger, but did not in the least project. I felt no other perforation. From the back-part of the orifice of the uterus, or what I took for such, a cicatrix extended about two inches obliquely downwards, and to the left of the pelvis; then somewhat upwards, in a semicircular form. I passed my finger several times along this cicatrix, pressure upon which gave no pain.

Mrs Granan now walked about the house, also in the garden, and made no manner of complaint. I therefore suppose her perfectly recovered.

I have been tediously minute in the above narration, that every one may form a judgement of the case according to his own conviction. Many physicians of this place entertained doubts whether there had really been a laceration.

The phenomena succeeding a laceration of the uterus or vagina, and escape of the foetus into the cavity of the lower belly, cannot fail to be exceedingly various; according

ding as there may be larger or smaller blood-vessels divided ; according as any part of the child presses upon, or disturbs the functions of a particular viscus ; the length of time this irritation has lasted ; the strength, the weakness, the irritability of the woman ; and the impression it makes upon her mind. It is likewise evident, that its happening from external violence only, or the vehement, perhaps unseasonable, exertions of the woman, while she is yet vigorous and healthy ; or its happening after long labour, when the woman is exhausted, the juices degenerated, the parts bruised, inflamed, and tending to gangrene, from the long pressure, and repeated urgings of the presenting part against the collum uteri or vagina, or the irregular projection of a limb, or other part, against any portion of the uterus, previously weakened, or rendered thin by such projection, must make a difference.

Accordingly, on consulting authors, we find, that some women have felt little inconvenience, have eaten, slept, and lived several days, without much suffering ; dying, perhaps, from the putrefaction of the mass, which was neglected to be taken from them.

Others

Others have soon been affected with convulsions, vomiting, colick pains, anxiety, faintings, cold sweats, with inability to lie in a horizontal posture, and have died within a few hours, or have lingered in great misery for several days.

The accident too often has not been discovered till after death, by dissection. Or, if discovered early, yet the unhappy women were abandoned to their fate, and that even in hospitals of great renown. I do not mean to insinuate, that the case will not in general prove fatal ; a concurrence of too many lucky circumstances are requisite to a happy termination. I am also aware, that it will, in many instances, be difficult, in some impossible, to determine with certainty that a laceration has taken place.

Where the presenting part recedes, and the figure of the belly undergoes a considerable change, with a cessation of labour-pains, of the motion of the child, and in some cases with a contraction of the os uteri; the thought might occur to a person who has heard of, or experienced such accidents ; especially if extreme debility, and other threatening symptoms ensue ; and the introduction

roduction of the hand will determine the matter. But, where the presentation is not changed, suppose the head locked in, or presenting at the brim of the pelvis, the body in the cavity of the abdomen, pressed through a rent of the uterus, now contracted, and containing the head only; or, what has oftener happened, the arm continuing in the vagina, or out of the os externum; and the lower extremities, or most, or the whole of the body, in the cavity of the abdomen; then indeed the sagacity and dexterity of the best practitioner would be tried, and might be humbled.

Although a rupture of the uterus and expulsion of the fœtus into the cavity of the lower belly, before or after the os uteri has been dilated by labour-pains, even when left to itself, is not absolutely mortal, as appears by several observations; yet the successful terminations are proportionably so few, and those after so much suffering from putrid fever, diarrhœa, abscesses in the belly, ulceration and perforation of the intestines, that they do not warrant delaying the delivery, if possible by the natural passages; if

if not, by Gastrotomy. And the sooner this is undertaken, the better chance there will be of saving mother and child. How long life may subsist in the foetus, deprived of all communication with the mother, from a total separation of the placenta, or compression of the funis umbilicalis, without the benefit of respiration, is not yet ascertained: but, notwithstanding some rare examples, and some experiments to the contrary, there is reason to apprehend, that in general, under such circumstances, it cannot long survive.

The measures to be pursued for effecting delivery, must depend on the circumstances of the particular case. According as the whole, or only a part, and what part of the foetus has escaped into the abdominal cavity; the space of time elapsed since the laceration; the rupture being in the vagina, or more contractile uterus; the state of this viscus; the dimensions of the pelvis; the knowledge, ingenuity, dexterity, and intrepidity of the operator, must influence the determination.

Respecting that case of ruptured uterus, where it does not happen during parturition,

but at some earlier period of gestation, from falls or other external violence, the diagnosis and practice will be attended with still more difficulty. We must, however, do as well as we can, till more enlightened by future experience. In the present state of our knowledge, if I could determine with certainty, that such an accident had taken place, and that the fœtus was expelled into the cavity of the abdomen, I should not be inclined, unless in the early months of pregnancy, to leave it to Nature. There remains, then, only two expedients, the forcing a way through the natural passages, or excision. The former, if ever possible, is an arduous undertaking, will require a great deal of judgement to determine in what particular circumstances it may be practicable or eligible, and not a little dexterity in the execution. By the other method, delivery may always, with certainty, be effected; and that method has been attended with success.

CASE II.

ANOTHER LACERATION IN THE SAME FEMALE.

MRS GRANAN, the subject of the foregoing observations, acquainted me, in the beginning of May 1787, that she was again pregnant, and near her term. As the lady proposed lying in at her house in the country, she requested me, that if it should happen by day, I would come to her assistance. I took that opportunity to examine the vagina, which was uniformly dilated, without any particular contraction or structure; but the cicatrix was easily distinguishable, and seemed to be harder, more extensive, and to run more transversely than it did five or six weeks after her delivery. She had long been subject to ulcers on the leg, and during the last eight days previous to her falling in labour, coughed much. The two last days she was feverish, with an erysipelas on one leg.

The 25th of May, Mrs Granan was seized with labour-pains; they were strong and frequent. At ten o'clock, the membranes broke, whilst

whilst the midwife (the same who had attended in 1785) was examining; whereupon she made some attempts to alter the position of the head. The pains continued yet for some time, but weaker. By twelve o'clock they ceased entirely.

When I visited the patient, at half past five in the morning of the 26th, she was perfectly easy. No bad symptoms; the child's head in the pelvis; the sagittal suture transverse, lambdoidal to the left. The right ear could just be felt at the upper part of the symphysis pubis. The tumour of the abdomen had nearly the usual appearance. On applying a hand, the thigh, knee, and leg of the fœtus, could be distinctly traced; and the side of its body felt, in a direction between the scrobiculum cordis and ossa pubis. Between these bones and the left ilium, a roundish body was felt, which I could not determine to be any part of the child; but I did not examine very minutely, nor took any alarm. No change in the position of the child had taken place; no particular sensation observed; and no complaint, ex-

cept of some anxiety, which was nothing unusual to that lady.

I waited some hours in expectation of pains returning. None followed, nor had she felt any motion of the child since the preceding day. A clyster was now given, which procured a stool, but excited no pains. She continued well, and took some food. At four o'clock, seeing the pains were not likely to return, I examined more accurately. The head appeared to have descended a little, perhaps from coughing, and from the efforts to make urine, and go to stool. On passing my finger behind the head, I discovered the lower edge of a laceration; and therefore supposed the cicatrix again opened. That the action of the uterus might not increase the division of the parts, the forceps was applied, by which the head was easily extracted, the occiput gradually emerging from under the pubis. But when the perinæum was flipped over the face, as far as the mouth, Nature made no effort, as usual, to finish the expulsion of the head. I was therefore obliged to free it entirely.

After pausing a little, finding that the
child

child did not breathe, I proceeded to extract the breast, without waiting for pains, by pulling gently at the head. The face turned to the right of the mother, that it might correspond with the position of the body. The shoulders, however, not advancing, I put a finger into the axilla, next the perinæum; brought the shoulder out, and the arm down. The body not still coming forward, I put a finger into the axilla, under the pubis, brought it along, and finished the extraction.

The lips were livid; no pulsation in the funis. Some means were, notwithstanding, used to excite the vital actions, till it was perceived that the cuticle, by gentle scratching, was easily stripped off from sundry places.

On applying a hand to the woman's belly, I felt the uterus of the natural size. I waited some time for after-pains: none coming, I examined with a finger in the vagina, where I found a loose substance, which I took for the edge of the placenta, covered with the membranes; but on examining

more narrowly, I discovered it to be intestines.

I now introduced the hand along the funis, till I came to what seemed to be a knot upon it. This, I then thought, accounted for the child's death. I could not trace the funis farther than this knot, when it seemed to be entangled with other parts. At a little distance from this, I felt somewhat like the funis again, running in a transverse direction, round which I passed my finger, and found that there was no mesenteric attachment, therefore no intestine. I supposed then, that the funis divided, and was inserted into two different parts of the placenta. Not comprehending what I felt, I passed my hand farther on, turning the palm forwards, and found a body which I at first thought might be the placenta. Examining whether it was every where detached, I observed that it was too smooth and uniform for the placenta; I concluded it, therefore, to be the uterus. Advancing my hand still farther, I found there was nothing between the points of my fingers within, and the hand without, but the parietes abdominis.

nis. I had the palm of my hand, therefore, on the external posterior surface of the uterus. I now withdrew my hand, keeping it in contact with that viscus, till I came to the os uteri, which was more contracted than is usual so soon after the birth, unless by a temporary spasm. In that contracted state, I could not reach far into the uterus; nor did I feel any part of the secundines, nor the funis leading to them. I therefore withdrew my hand entirely.

After letting the woman repose for some time, I introduced the hand again. The intestines were in the way; but, tracing the funis to the knot, and where it seemed to be entangled, by gently pulling, it seemed to slip off from its former attachment at that place, and now led me to the placenta loose among the intestines.

When the placenta was extracted, I only cast my eye hastily over it, having many other things to attend to. I observed, however, that there was no knot, no branching of the funis, nor could I conceive what I had taken for such. I thought of the appendix cæci vermiformis, of præternatural

adhesions or indurations from the former accident, but could not form any satisfactory conjecture.

There had been all along no discharge of blood, nor did any thing like a recent effusion follow the placenta, only a bloody serum, and that in no great quantity. I had felt no coagulum in the abdomen. The belly appeared to be larger than after the former birth, probably from inflation of the intestines; partly, perhaps, from her having lain with the shoulders low the former time, as it was a turning case; and this may, in some measure, account for the intestines having been less embarrassing after the former birth.

I now applied a bandage very loosely, and placed her in bed, with the shoulders low, desiring her not to sit up, or make any effort to raise or turn herself. She had no bad symptoms arising from parturition. She complained only of the cough and a swelled erysipelatous leg.

I left this woman at eight o'clock in the evening; and, in riding home, reflecting on all that had passed, began to think, that
my

my confidence in the firmness of the cicatrix, the well-formed pelvis, the favourable position of the child, and the absence of bad symptoms, had lulled me into an unsuspecting security, and rendered me less attentive than I ought to have been. Even after four o'clock, when I had felt the rent, I still imagined the child to be contained in the uterus, and proceeded slowly to extract, supposing atony only. But now, considering that there had not been, during the last eighteen hours, the least pain or inclination to bear down, the feeling the parts of the child so distinctly through the abdominal muscles, the unusual manner of the head and shoulders coming away, as if extracted from a person who had been some time dead; the want of after-pains, or any appearance of hæmorrhage; I believe there is little reason to doubt of the child's having been expelled from the uterus before twelve o'clock the preceding night; that what I mentioned above to have felt betwixt the pubes and ileum, was the contracted uterus; and that it is probable the placenta had also been early expelled.

27th May. Mrs Granan has had a good night. Complains only of the cough. Almost no lochial discharge. Belly soft; not more enlarged. Is desirous of food.

28th. Nearly in the same condition as yesterday. A clyster was injected, which had no effect. As she had raised herself up, expecting an evacuation, I examined whether any part of the intestines was fallen down into the pelvis, but found nothing unusual. I imagined that I felt the os uteri, but was unwilling to risk doing harm, by a minute investigation. Being asked, if I would look at the after-birth again, was glad to learn that it was not yet destroyed. The situation it happened now to lie in, explained satisfactorily to me the deceptive feel of a knot upon, and forked branching of the funis. A portion of the membranes had made a turn round the funis, (most likely the placenta had made a rotation), not far from its insertion into the placenta. The extremity of this portion of the membranes formed a pouch, containing a large coagulum; the weight of which gave the membranes, stretched between the coagulum

lum and funis, a considerable degree of tension, the resemblance of a cord; and, in passing round the funis, the feel of a knot, or entanglement.

Although Mrs Granan had not, after this birth, any very threatening symptoms, yet she suffered much more than after the former accident. She was, from the 29th of May, for a couple of weeks, more or less feverish, owing partly to resorption, partly to suppuration which was going on in the abdomen. She had diarrhæa, aphthæ, and sometimes vomited, but had withal, in general, some appetite for food. The lochial discharge was upon the whole scanty, the first eight days foetid. I find noted of the 3d June, that the belly was lessened in size, but hard; the 11th of June, that she was feverish, the belly enlarged, with a tympanitic feel. The 18th of June, she was pretty well; the abdominal tumor reduced. An abscess pointed near the navel; but, being mistaken for a hernia, was not opened till I saw her on the 24th, when about six ounces of thick foetid matter were slowly discharged from it. The entrance into the abscess had

a winding course, which prevented a probe or bougie penetrating; but, four weeks afterwards, when it became necessary to dilate the sinus, a probe penetrated about four inches, in a direction towards the pelvis. Mrs Granan, who dressed the sore herself, kept the sinus open, by introducing occasionally bits of bass violin-strings, or prepared sponge. The 17th July, when I saw the patient for the last time, the abscess was not quite shut; but put her to no inconvenience, nor hindered her from visiting her friends.

Respecting the alterations in the state of the uterus and vagina, I find noted in my journal: "6th of June, on examining per vaginam, found in the bottom of it a round hole, without any projection, like what I had taken for the orifice of the uterus, the 34th day after the former delivery. To the right of this, an aperture about two inches in length, which I took to be the remains of the laceration. Examining all round the edges of this aperture, gave no pain. I could not distinguish any thing beyond it.

18th June. What I took for the orifice
of

of the uterus has nearly the same feel as above observed, the 6th. What seemed to be the rent is now about three quarters of an inch long.

7th July. Six weeks after the accident, the orifice in the bottom of the vagina, which I took for that of the uterus, just admitted the tip of a finger. What I had taken for the laceration to the right of the orifice just mentioned, was still open, but so much reduced as only to admit the point of a finger. Touching it gave no pain. The old cicatrix (to the left, respecting the pelvis) felt just as it did five weeks after the former birth. I suppose that to the right was a new laceration.

17th July. I found what I had taken for the os uteri, rather more contracted. The laceration just distinguishable by the point of the finger; perhaps a bougie would still have passed through it.

It was not possible for me to visit this patient daily; nor was it necessary, as she was under the care of an able physician, Dr Schutt, who attended her also during the former

former lying-in, and merited both her and my entire confidence.

I wish that I had attended the whole progress of this last labour from the beginning, and could have observed whether the supposed orifice of the womb dilated, or what other part gave way. It is mentioned above, that I found the orifice of the uterus, the 6th of June, in the like state as I had felt it the 34th day after the former delivery. This is a degree of contraction not to be expected in the space of twelve days, and renders it doubtful whether the child came out through that orifice, or forced a new passage through the collum uteri. At the same time, I believe that the orifice mentioned was really that of the uterus, or led to it; because, after the former recovery, I found no other perforation in the vagina, for the discharge of the menses, or to admit of impregnation.

Taking the abscess and other symptoms into consideration, compared with what I observed on dissecting the subject of my fourth case, I am inclined to think, that the laceration this last time extended to the
body

body of the uterus. I always suspected, that the midwife (an ignorant, conceited, and enterprising rustic) perforated the vagina the first time, in endeavouring to reduce the hand; and did mischief the last time, by her attempts to alter the position of the head.

CASE III.

UTERUS BURST DURING PARTURITION.

I WAS sent for, Saturday the 29th of August 1786, to a woman under middle age, who had been in labour of a first child since Wednesday the 26th in the afternoon. The midwife said, the waters had presented in a large form, and broke of themselves on the Thursday morning; that the pains had little effect. Friday, the woman vomited often. The night between Friday and Saturday, she had not slept. Saturday morning at nine o'clock, she heard a noise, as if something had burst within her. Since that time, till I saw her about eleven of the forenoon, she had not had any labour-pains,

but much anxiety and faintness; the pulse scarcely to be felt; her hands were cold. The belly was very prominent; the midwife said, after hearing the noise, it was become fuller in the upper part; and that the head had changed its position in the vagina. But she could not describe the change. It had, perhaps, receded a little. I found the head, however, yet low enough for the application of the forceps. The scalp felt loose upon the cranium, as it does when putrefaction has lessened its adhesion. The position of the bones respecting one another, and the sharp feel of their edges at the futures, left no doubt of the child's having been already some time dead; although the woman said, she had lately felt it move.

The abdominal tumor was still perfectly circumscribed, as if the child and waters were yet contained in the uterus. The most prominent part of the much-distended belly, had an unusual soft feel. I, at first, apprehended that the urinary bladder was stretched before the uterus; but, by repeating the examination, was convinced
of

of its being air. There was a disagreeable cadaverous smell in the chamber.

Although I had no prospect of doing any good here, yet I would not abandon the woman entirely; as it might, possibly, be only a temporary faintness. I therefore went home for my instruments; but, when I returned after about a quarter of an hour, the woman was breathing her last; and expired in about two minutes. I proposed opening her immediately, to take out the child; perhaps to save a second child, of which the size of the belly and œdematous extremities gave some suspicion. Besides, I was very desirous of examining into the cause of her death. But this the husband could not be prevailed upon to permit. He, however, bethought himself, about six hours after, and sent to acquaint me, that I might do as I thought proper. The belly being then much more elevated, the fœtor considerable, and the weather very hot, I hesitated a little, on account of the putridity. But the desire of investigation prevailing, I made a short incision through the containing parts, where thinnest; intending,

should the smell prove very offensive, to sew it up again immediately. A small quantity of fœtid air issued at the opening, but not very intolerable. I therefore proceeded to expose the uterus fully. There were only six or eight ounces of bloody serum in the abdomen; no considerable fœtor, nor diseased appearance; except that the uterus was exceedingly distended, and of an uniform figure, as if blown up. To the left, it was emphysematous; the external tunic was there separated from the substance of the uterus. Under the ligamentum latum of that side, an arm of the child could be felt, covered only by the peritonæum. I now opened the uterus; which was not thicker than the eighth part of an inch, and tore as easily as a sheet of writing paper, especially towards the left. It contained no detached air. The child was exceedingly emphysematous; the nates uppermost, and forwards; the feet backwards, inclining to the left. It required a considerable degree of force, to withdraw the head from the pelvis. The placenta was easily separated. No appearance of large vessels

vessels or sinuses; no extravasation; no coagula. But, now that the uterus was emptied of the child and secundines, there soon accumulated a great deal of bloody serum in it; which was removed by a sponge, but continued to accumulate quickly. Searching for the source of this fluid, I found that it had been collected under the peritonæum, from where it covers the musculus iliacus internus, to above the kidney, and back as far as the spine; but there was no coagulum. The laceration in the uterus began backwards, a little above the os tincæ; extending to where it was mentioned, that the arm of the foetus was felt under the ligamentum latum.

Was not the uterus burst, in this case, by the increasing bulk of the child? Was not procraftination here carried too far? What must be the consequence of attempting to turn a child, under the like circumstances*?

U 2

CASE

* The uterus, in this woman, being so excessively distended, could exert but little power towards

CASE IV.—RUPTURED UTERUS.

ON the 1st of February 1789, I was sent for to a woman in labour of her ninth child. She was about thirty years old. Had twice born twins. All were natural births, and living children. I was further informed, that this labour had commenced the preceding day, at two o'clock in the morning. At three, the waters were discharged copiously. Trifling pains continued the whole day; but, from eleven to twelve at night, the pains had been strong, as the attendants said;

wards expelling its contents. It was even in a much worse situation than it is, when overstretched by a plurality of children, or great quantity of liquor amnii; because, in the last case, the distension happening gradually, the uterus thickens in proportion, and the discharge of the waters, or the birth of a child, gives an opportunity for its recovering more force and contractility. Whereas, in the first case, the extraordinary distension took place suddenly; and was, after the discharge of the waters, hourly increased by the putrefaction.

said; which, however, the midwife contradicted. All agreed, that, after midnight, the woman had not had any forcing pains; but only complained of anxiety, and a continual pain in the belly, particularly to the left. At half past three in the morning, she had convulsions, with some discharge of blood from the vagina.

When I came there, at seven in the morning, the woman was sitting up in bed; not being able to lie down, on account of anxiety. Her pulse was very weak; the hands not cold. The obscurity of the chamber prevented me from making any observations on her face. The vagina was filled up with a large hemispherical body, forwards; and behind, with a transverse fold, about the size of a child's arm. But both were soft, and evidently connected with the pelvis. I could, however, feel no part of the child.

Mentioning this last circumstance to the midwife, she affirmed having felt the head. I hinted, that as the upper part of the sacrum projected much forwards, she might have taken it for the head. The midwife

replied, that she had introduced her hand, and passed it quite round the head ; but, since the convulsions, she had felt nothing of it.

Suspecting that the uterus was ruptured, and that the child was already expelled into the cavity of the abdomen, I examined the belly attentively. It had, however, the same uniform feel, and roundish figure, as when the foetus with the waters are included in the uterus ; only, at two particular places, the feel of some small parts of the child seemed to be too sharp and distinct.

I now took her husband and mother into a separate apartment ; told them my opinion of the case, that there was very little chance of recovery ; that there was not an absolute certainty of the child being dead ; and that I would attempt to deliver the woman, if they desired it ; but that they must not be surpris'd, if she died during the operation.

Delivery being resolved on, I had her properly placed ; introduced my hand ; felt the placenta loose at the brim of the pelvis. Beyond that, the child's head and a hand.

A little higher, a foot; which I brought down; but, the child not easily following, I put a noose on the foot; and, along that leg, went up in search of the other foot, being afraid it might have such a position as to increase the laceration, or injure the contents of the abdomen, if in that cavity, of which we were not yet certain. Having now both feet, I proceeded to extract the child, which was of a very large size. It required considerable force to bring the breast through the pelvis, and the head through the upper strait. I have, however, seen children born alive, where equal force and more time were required to extract them. But this was dead.

A considerable quantity of bloody serum gushed out with force, whilst I was bringing down the feet; and, during the extraction of the body, urine flowed from the urethra.

The secundines being now also immediately brought away, I introduced my hand again, to ascertain, whether the uterus was really ruptured; and, for the first time, felt it at the brim of

the pelvis; hard and contracted, so as to admit with difficulty the points of three fingers. This made it probable, that the uterus had been for a considerable time empty; and that I had not extracted the child out of, or through it; and that the laceration must be in the vagina. Passing my hand, to the right of the uterus, gradually higher, I met with no resistance, till I came to the firm smooth surface of the parietes abdominis, forwards; and backwards, I felt the intestines.

The woman made no manner of complaint during this investigation. However, I did not think myself at liberty to carry research farther on a living subject.

A bandage being now applied, the woman was put to bed. She bore the operation well; nor did her strength diminish. A light cordial was given frequently; but she died about five hours after delivery.

Although I had no doubt of there being a laceration, and that I had extracted the foetus and secundines from the cavity of the abdomen; yet I wished to know the whole extent of the injury; and offered

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to finish my examination in the space of three minutes; but could not, by any means, prevail upon the relations to allow the body's being opened. I got, however, an opportunity by night, after the body was sent out of the house for interment, to examine it hastily in the coffin.

The belly being uncovered, appeared flat and livid. The parietes of the abdomen made little resistance to the knife, or to a tearing force. The recti muscles, I expected, as she twice carried twins, to have found separated from one another to a considerable distance; but they were not, nor was the belly in the least pendulous. The interstices between the turns of the intestines were filled with dark-coloured bloody serum, of the consistence of liquid blood. The surface of all the contained parts were florid. The uterus appeared to be entire, and of a considerable size, extending from the ossa pubis to the tranverse flexure of the colon, which divided the cavity of the abdomen into two nearly equal parts. Between the uterus and that intestine, lay

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the omentum, irregularly, but closely folded up; it was, however, easily extended, so as to reach the pubis. The intestines, almost empty, had no tendency towards the pelvis; which was otherwise secured against their intrusion, by the uterus. The fluid blood, which amounted to six or eight ounces, being removed, and the uterus drawn well up towards the diaphragm, the peritonæal covering, now detached from the whole anterior surface of the collum, and half-way up to the superior part of the fundus uteri, did not follow. When that membrane was also separately drawn upwards, it formed a pouch, with a large transverse aperture. This aperture or rent in the peritonæum, was bounded to the right by the beginning of the round ligament; its termination to the left, I do not recollect. There was, moreover, a laceration in the substance of the uterus; which did not, however, correspond with that of the peritonæum; but began at or lower than the ossa pubis, and extended upwards obliquely to the right; terminating near the origin of the round ligament, and of equal height

height with the ovarium. I have said that the laceration began at the ossa pubis; but where it originated, respecting the soft parts, I could not precisely determine; as, from the little time allowed me, the contusion and destruction of parts, I could not distinguish what was collum uteri, or what vagina, anteriorly. But a large projection of the os tincæ, still very low in the pelvis, even whilst the uterus was drawn upwards, evidently shewed where the collum uteri terminated backwards. This circumstance, with the low situation of the bladder, which formed the principal bulk of the prolapsus forward, renders it probable, that the anterior portion of the vagina was wholly sunk in the pelvis, and that the laceration was entirely or principally in the collum and body of the uterus. The opening into the cavity of the fundus, at the upper part of the laceration, would now have easily admitted the flattened hand: there must then have been a temporary spasmodic constriction at the moment, which I had taken for the contracted os uteri. The edges of the laceration, where thinnest, might be a quarter

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ter of an inch thick, or upwards ; but had a spongy feel ; and incisions into them, shewed that the thickness was partly owing to extravasated blood, perhaps from long continued contusion. When the uterus was opened, by a perpendicular incision, to the left of the rent, its substance had a whitish appearance. The anterior part of the fundus was full two inches thick *.

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* The great disproportion (viz. eight to one) in the thickness of the upper part of the uterus, compared with the middle and lower parts, which I have termed *body* and *collum*, cannot be supposed to have existed in that degree, during pregnancy ; but was owing no doubt, in a great measure, to the action of that organ during parturition. The efforts of the fundus, or upper part, overcoming the resistance of the lower parts, forced its contents into them, dilated and rendered them thinner ; the upper part at the same time acquiring more thickness and solidity. But the contents of the uterus, which in this woman found no exit through the pelvis, would accumulate in the lower portion of that viscus, till the part most strained or bruised must give way. This state of the parts may account for my having mistaken the upper firmer part for the whole
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There were no coagula, except a small dark-coloured one in the vagina. The space from the symphysis pubis to the upper part of the sacrum, measured exactly three and a half inches English.

The stupidity and inattention of the people about this woman, made it impossible for me to obtain a satisfactory account of what happened, or of what she complained during the labour, which renders this case less instructive than might be wished.

The pains were reported to have been inconsiderable during the whole time of labour. This was, perhaps, respecting their effects in promoting the birth; or, perhaps, the woman was uncommonly patient, for it must be supposed that she had suffered excruciating pain. And, in fact, some time after I had noted down the whole of the above, the midwife, in consequence of some queries I had put to her, informed me, that

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of the uterus; the contracted entrance into its remaining cavity for the natural orifice; and for my not distinguishing the looser, softer, lower portion, from the other soft parts.

on pondering the subject in her mind, she recollected, that the pains were, in every sense, weak in the forenoon; but, at four afternoon, the woman began to complain that the pains, which took their rise in her back, went round the haunches, and ended in her belly, as if the child would force its way out there. She complained also of cutting pains in her belly; and the midwife said, that she had herself felt the child urging forward that way; that, just before the convulsions happened, the woman had cried out, "Oh! my heart, my heart will come out of my mouth." The midwife farther informed me, that the former children were all small, and that the waters had remained to the last.

It is doubtful whether the laceration took place at twelve or half-past three, or by a gradual progress; whether the convulsions were the cause or consequence. Perhaps the pain of beginning laceration, or the internal hæmorrhage, occasioned the convulsions, and these completed the expulsion of the uterine contents.

I have no reason to suspect that the midwife

wife did material injury; for, in replying to my question, she said, that she had not introduced the hand in order to assist, or to alter the position, but merely to examine if any other part presented with the head. Nor did she pull at the parts filling up the vagina, nor took them for any part of the child, knowing that the woman had a prolapsus. Had the rent been in the vagina only, the midwife might have occasioned it, by rudely going up in a wrong direction. There probably was predisposition to rupture, a great inequality in the thickness and strength of the propelling viscus, irregular uterine contractions, an unfavourable position of the head, which otherwise was evidently disproportioned to the capacity of the pelvis. The husband said, that this child was much larger than any of the former; that all the former labours had been slow, requiring at least thirty-six hours.

Though the prolapsus, including the more or less distended bladder, did not make any considerable resistance to the descent of the head; yet, the bladder being sunk below the upper edge of the ossa pubis, there remained

mained so much the less soft medium between the uterus and these bones ; the colum uteri would therefore be more exposed to injury from the urgings of the child's head ; and the waters breaking so early also increased the difficulty. Perhaps not any one of those causes would, singly, have produced an effect to which, in conjunction, they were equal.

The foetus remaining convoluted, and retaining the roundish form in the abdomen, the head likewise being still the lowest part, renders it probable that it was not alive at the period of expulsion from the uterus. It puzzled me exceedingly, to conceive how, with that form and position, the child could be expelled from the uterus through a rent in the vagina ; or from that part being partially torn off from the uterus, which, before dissection, I imagined to be the case. But, as the laceration extended high in the body of the uterus, and that in an oblique direction, which is in a lesser degree transverse, it is not difficult to imagine, that the containing and expelling viscus, being
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once detached from one side of the pelvis, would, by its contractions, be gradually drawn over towards the fixed points to which it remained connected, at the same time forcing out its contents, *qua data porta*; and that a laceration once begun, would be easily extended to any requisite degree.

From the peritonæal covering of the uterus being separated to such a great extent, and not torn opposite to, or in the direction of, the rent in the substance of the uterus; it is probable that the substance of that viscus first gave way, and that a considerable portion of the fœtus was without the uterus, before the peritonæal tunic burst transversely at the uppermost part of the rent in the uterus.

From the large size of the child's head, its being no way flattened or distorted, the absence of swelling or discolouration of the integuments, as well as from the midwife easily passing her hand round it, I suppose it never had been in the pelvis.

As the child lay in the right side of the abdomen, the emptied uterus would of consequence be pushed over to the left. Hence,

perhaps, the pain complained of in the right side of the belly.

The uniform distension and roundish figure of the belly, notwithstanding the waters had been early discharged, was owing to the great quantity of extravasated fluids collected in the abdomen, and retained by the large portion of detached peritonæum, acting as a valve, supported, perhaps, by the prolapsus. This valve, when raised by the introduction of the hand, and whilst the feet were in the pelvis, opened a passage for those pent-up fluids, which were then discharged with impetus. The urine was also forced out of the prolapsed bladder, as soon as the nates and body of the child filled up the pelvis.

The florid colour of the several parts contained in the abdomen, I at first attributed to the extravasated blood, changed by the admission of air through the laceration; but as the surface of the fluid occupying the interstices of the guts, and the coagulum found in the vagina, were dark-coloured, peritonæal inflammation is rather to be considered as the cause.